

Notice of Allowability

Application No.

10/826,067

Examiner

Ted M. Wang

Applicant(s)

WALSH ET AL.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/28/2008 amendments.
2. ☒ The allowed claim(s) is/are 1-12 and 14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 8/1/2008.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

/Ted M Wang/
Primary Examiner, Art Unit 2611

DETAILED ACTION

Examiner Amendments

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Applicant's representative David Poirier on 08/01/2008.
3. The application has been amended as follows:

In the claims:

- Claim 14, line 3, before "period" insert --- M ---, line 4, after "signal" insert --- , wherein M is modulus ---, and line 5, after "modified" insert --- said ---.

Allowable Subject Matter

4. Claims 1-12 and 14 are allowed.
5. The following is an examiner's statement of reasons for allowance.
 - The prior art fails to teach an apparatus of Claims 1, 7, 8, 12 and 14 that specifically comprises the following:
 - The instant application is deemed to be directed to a non-obvious improvement over the admitted prior art of the instant application and the invention patented in Pat. No. US 6,614,319, US 6,642,800, US 6,556,086 and US 2002/1091727.

The improvement comprises:

With regard Claim 1, " a phase adjustment circuit responsive to said synchronization circuit for varying the phase of said output signal with respect to said input reference signal. " as recited in combination with other limitation in claim 1,

With regard Claim 7, " an interpolator responsive to F and M, where F is the fractional value, and M is the modulus, and said phase register, to provide to said frequency divider an output which is a fractional value equal to, on average, said input fraction, wherein an enable signal applied to said synchronization circuit resets said interpolator with said predetermined phase adjustment value to vary the phase of said output signal with respect to said input reference signal." as recited in combination with other limitation in claim 7,

With regard Claims 8, " an interpolator responsive to said phase adjustment circuit to provide to said frequency divider an output which is a fractional value equal to, on average, an input fraction F/M varied by said modified phase adjustment value to vary the phase of said output signal with respect to said input reference signal." as recited in combination with other limitation in claims 8, and

With regard Claim 12, " a phase adjustment circuit responsive to said synchronization circuit for varying the phase of said output signal with respect to said input reference signal, said phase adjustment circuit

including a switching circuit for selectively applying said fractional value and a modified fractional value to said interpolator to define a predetermined phase relationship between said output signal and said input reference signal. " as recited in combination with other limitation in claim 12, and

With regard Claim 14, " selectively applying a fractional value and a modified fractional value to an interpolator of said fractional-N synthesizer to define a predetermined phase relationship between said output signal and said input reference signal. " as recited in combination with other limitation in claim 14.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Reference(s) US 6,614,319 and US 6,642,800 are cited because they are put pertinent to the fractional -N synthesizer with interpolator. However, none of references teach detailed connection as recited in claim.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

/Ted M Wang/
Primary Examiner, Art Unit 2611